

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A transmission system, ~~adapted for the transmission of IP data packets, said system including an IP network (IP NET) and a network (LAN) protected by a firewall, said firewall being adapted to block incoming traffic to the protected network, and devices (IC BREAKER 1 and IC BREAKER 2) to open the firewall to enable IP data packets to be transferred through the firewall to the protected network, characterised in, that said devices to open the firewall include a first IC breaker (IC BREAKER 1) located on the IP network side of the firewall and a second IC breaker (IC BREAKER 2) located on the protected network side of the firewall, that said firewall is transparent to a particular type of IP packets to enable communication between said IC breakers through the firewall using said particular IP packets, and that said first IC breaker is adapted to from the IP network equipment receive IP data packets, intended for the protected network (LAN), and that said first IC breaker is adapted to, on receipt of such a particular IP data packet for the protected network, send said particular IP packet to said second IC breaker, and besides an IP packet of said particular type, returned by said second IC breaker to said first IC breaker, occasionally opens the firewall, at which said first IC breaker is adapted to, on receipt of a returned IP packet of said particular type, send said received IP packet through the open firewall to the second IC breaker, and that said second IC breaker is adapted, on receipt of said IP data packet, to send the received IP data packet to the protected network~~ configured to transmit IP data packets, comprising:

an IP network;

a protected network protected by a firewall configured to block incoming traffic to the protected network;

a first IC-breaker; and

a second IC-breaker; wherein

said first and second IC breakers are configured to open the firewall to allow the IP data packets to be transferred through the firewall to the protected network;

said first IC-breaker is located on a IP network side of the firewall and the second IC-breaker is located on a protected network side of the firewall, and said firewall is transparent to a particular type IP data packet, configured to communicate between said first and second IC-breakers through the firewall by using said particular type IP data packet;

said first IC-breaker is configured to receive the IP data packets from the IP network, the IP data packets intended for the protected network, and said first IC-breaker is configured to send the particular type IP data packet to said second IC-breaker after reception of the particular type IP data packet; and

said first IC-breaker is further configured to open the firewall for a time period at reception of a returned particular IP data packet from the second IC-breaker, and said returned particular IP data packet is sent before the firewall opens through the firewall to the second IC-breaker, and the second IC-breaker is configured to send the particular type IP data packet to the protected network after receiving the particular type IP data packet; and

said particular IP data packet is a ping-packet.

Claim 2 (Cancelled).

Claim 3 (Currently Amended): The transmission system according to Claim 1, A
~~transmission system, as claimed in claim 1, characterised in that~~ wherein ~~said firewall is~~
~~configured~~ adapted ~~to be transparent to IP-communication through the firewall from the a~~
~~protected network side to an IP network side inside to the outside thereof, and, for~~ during the

time period ~~a limited period of time~~, open to IP-communication through the firewall from the ~~outside to the inside~~ the IP network side to the protected network side thereof.

Claim 4 (Currently Amended): The transmission system according to Claim 1, A ~~transmission system, as claimed in claim 1, characterised in that~~ wherein said first IC-breaker (IC BREAKER 1) is configured ~~adapted~~, on receipt of an IP data packet, to store said particular type IP data packet and to send said stored IP data packet through the ~~open~~ firewall to the second IC-breaker (~~IC BREAKER 2~~), when the firewall has been ~~the~~ opened.

Claim 5 (Currently Amended): The transmission system according to Claim 1, A ~~transmission system, as claimed in claim 1, characterised in that~~ wherein said second IC-breaker (~~IC BREAKER 2~~) is configured ~~adapted~~ to identify ~~the~~ a size of a the ping-packet ~~Ping IP packet~~ received from a sender in a ~~the~~ form of a an IC-breaker, said size being indicative of ~~the~~ a type of packet[[,]] which has been received and a ~~the~~ port via which it was received.

Claim 6 (Currently Amended): The transmission system according to Claim 1, A ~~transmission system, as claimed in claim 1, characterised in that~~ wherein said protected network is a Local Area Network (~~LAN~~).

Claim 7 (Currently Amended): A transmission system, as claimed in claim 1, ~~characterised in that~~ wherein said system is an Asynchronous Transfer Mode ATM (~~ATM~~) transmission system, configured to transmit ~~adapted for the transmission of~~ IP data packets, using ATM as a carrier network.

Claim 8 (Currently Amended): ~~In a transmission system, adapted for the transmission of IP data packets, said system including an IP Network (IP NET) and a network (LAN) protected by a firewall, a method for the transmission of IP data packets to the protected network, said firewall being opened for a limited period of time and IP data packets are transmitted through the opened firewall to the protected network (LAN) characterised by a first IC breaker (IC BREAKER 1) being located on the outside of the firewall and a second IC breaker (IC BREAKER 2) being located on the inside of the firewall, and by~~
~~IP data packets being received and stored by said first IC breaker;~~
~~on receipt of said IP data packets a particular type of IP packets are transmitted by said first IC Breaker to said second IC breaker through the firewall;~~
~~awaiting receipt of said particular type of IP packet from said second IC breaker, said IP packet opening the firewall for a short period of time; and~~
~~sending said stored IP data packet through the open firewall to said second IC breaker~~

A method for using a transmission system transmitting IP data packets from an IP-network to a protected network protected by firewall, said method comprising:

receiving and storing an IP data packet by a first IC-breaker located on an IP-network side of the firewall;

transmitting the IP data packet by said first IC-breaker to a second IC-breaker located on a protected network side of the firewall through the firewall, on receipt of a particular type IP data packet;

opening the firewall by said particular type IP data packet for a period of time while awaiting receipt of said particular type IP data packet from said second IC-breaker;

sending said stored IP data packet through the open firewall to said second IC-breaker; wherein

said particular type IP data packet is a ping-packet.

Claim 9 (Cancelled).

Claim 10 (Currently Amended): ~~A method, as claimed in claim 9, characterised by:~~

~~the size of a Ping IP packet received from said first IC-breaker (IC-Breaker 1),
being identified by said second IC-breaker (IC-Breaker 2), said size being indicative of the
type of packets which have been received and the port via which it was received;~~

~~ping IP packet being returned to said first IC-breaker (IC-Breaker 1) by said
second IC-breaker (IC-Breaker 2), thereby opening the firewall for a limited period of time;~~

~~said second IC-breaker (IC-Breaker 2) awaiting receipt, from said first IC-
breaker, of said IP data packet for the protected network, during said limited period of time
said firewall is open; and~~

~~said second IC-breaker (IC-Breaker 2) sending the received IP data packet to
the protected network.~~

The method according to Claim 8, further comprising:

identifying by said second IC-breaker a size of the particular type IP data packet
received from said first IC-breaker, said size being indicative of a type of IP data packets
which have been received and a port via which the data packet was received;

returning the particular type IP data packet from said second IC-breaker to said first
IC-breaker, thereby opening the firewall for the period of time;

awaiting reception, by said second IC-breaker, of said IP data packet for the protected
network sent from said first IC-breaker, during said period of time the firewall is open; and

sending the received IP data packet to the protected network by said second IC-
breaker.

Claim 11 (Currently Amended): The method according to Claim 8, A method, as
~~claimed in claim 8, characterised in that~~ wherein said protected network is a Local Area
Network (~~LAN~~).

Claim 12 (Currently Amended): The method according to Claim 8, A method, as
~~claimed in claim 8, characterised in that~~ wherein said transmission system is an
Asynchronous Transfer Mode ATM (ATM) transmission system, ~~adapted for the~~
~~transmission of~~ configured to transmit IP data packets, using ATM as a carrier network.

Claim 13 (Currently Amended): An apparatus configured to provide Apparatus for
~~providing~~ access to a firewall protected network, comprising:

means for ~~temporarily~~ opening the firewall to enable IP data packets to be transmitted
through the firewall to said protected network, wherein (~~LAN~~) ~~characterised in that~~ said
means for ~~temporarily~~ opening the firewall ~~include two~~ includes a first and second IC-breaker
~~IC-breakers, (IC-breaker 1 and IC-breaker 2)~~ located on opposite sides of said firewall, and
wherein in that

said firewall is configured ~~adapted~~ to allow IP-traffic from ~~one~~ a protected side
thereof to another ~~the other~~ side, and communication between said first and second IC-
breakers using a Ping service, a response to said Ping service ~~temporarily~~ opening the
firewall for transmission of IP data packets to said protected network (~~LAN~~).

Claim 14 (Currently Amended): The apparatus according to Claim 13, Apparatus as
~~claimed in claim 13, characterized in that~~ wherein the first IC-breaker, located on ~~the outside~~
an IP-network side of said firewall, is configured ~~adapted~~ to:

[[-]] store IP data packets destined for the protected network (~~LAN~~);

[[-]] send ping-packets ~~Ping IP-packets~~ to the ~~other~~ second IC-breaker through the firewall;

[[-]] await receipt of a returned ping-packet ~~Ping IP-packet~~ from ~~said other~~ the second IC-breaker, said returned ping-packet ~~IP-packet~~ opening the firewall for a ~~limited~~ period of time; and

[[-]] send said stored IP data packets through the open firewall to said ~~other~~ second IC-breaker.

Claim 15 (Cancelled).

Claim 16 (Currently Amended): The apparatus according to Claim 13, Apparatus as
~~claimed in claim 13, characterised in that~~ wherein the first IC breaker ~~one of said IC breakers~~
~~(IC-BREAKER 1)~~ is located on ~~the outside~~ an IP-network side of the firewall and that the
second IC-breaker ~~one of said IC breakers (IC-BREAKER 2)~~ is located on the protected
network side (~~LAN~~) of the firewall, ~~in that~~ wherein said first IC-breaker is configured
~~adapted~~ to receive and store IP data packets destined for the protected network, wherein ~~in~~
~~that~~ said first and second IC breakers are configured ~~adapted~~, on receipt, by said first IC-
breaker, of a IP data packet for the protected network, to communicate with each other,
through the firewall, using ping-packets ~~Ping (ICMP) packets, a Ping-packet, one of said~~
ping-packets returned by said second IC-breaker to said first IC-breaker ~~temporarily~~ opening
the firewall for this type of traffic, ~~in that~~ and wherein said first IC-breaker (~~IC-BREAKER 1~~)
is configured ~~adapted~~, on receipt of the returned ping-packet ~~Ping-packet~~, to send IP data
packets through the opened firewall to the second IC-breaker (~~IC-BREAKER 2~~), and ~~in that~~

wherein said second IC-breaker is adapted, on receipt of said IP data packet, to send the received packets to the protected network.

Claim 17 (Currently Amended): An IC-breaker adapted for use with apparatus as claimed in claim 13, ~~characterised in that~~ wherein said IC-breaker includes:

means for transmitting ~~PING~~ ping-packets to ~~an~~ at least one of the first or second IC-breaker, located behind a firewall[[,]];

means for storing a received IP data packets[[,]];

means for detecting receipt of said IP data packets from within said firewall[[,]]; and

means, operative in response to receipt of IP data packets, to transmit stored IP data packets.

Claim 18 (Currently Amended): An IC-breaker configured to be used ~~adapted for use~~ with apparatus as claimed in claim 13, ~~characterised in that~~ wherein said IC-breaker includes:

means for identifying a received ~~PING~~ ping-packet and determining an associated IP data packet type thereto; ~~therefrom~~,

means for transmitting ~~an~~ IP data packets of said associated IP data packet type through the firewall[[,]];

means for receiving ~~an~~ the IP data packets transmitted through said firewall[[,]]; and

means for distributing at least one of said IP data packets to a predetermined address.

Claim 19 (Currently Amended): A transmission system configured to transmit , ~~adapted for the transmission of~~ IP data packets, said system including an IP-network (~~LAN~~) protected by a firewall, ~~characterised in that~~ wherein said system includes an apparatus as claimed in claim 13.

Claim 20 (Previously Presented): A communications system including a transmission system as claimed in claim 1.

Claim 21 (New): A transmission system configured to transmit IP data packets, said system comprising:

an IP network;

a protected network protected by a firewall configured to block incoming traffic to the protected network;

a first IC-breaker; and

a second IC-breaker; wherein

said first and second IC breakers are configured to open the firewall to allow the IP data packets to be transferred through the firewall to the protected network; wherein

said first IC-breaker is located on a IP network side of the firewall and the second IC-breaker is located on a protected network side of the firewall, and said firewall is transparent to a particular type IP data packet, configured to communicate between said first and second IC-breakers through the firewall by using said particular type IP data packet;

said first IC-breaker is configured to receive the IP data packets from the IP network, the IP data packets are intended for the protected network, and said first IC-breaker is configured to send the particular type IP data packet to said second IC-breaker after reception of the particular type IP data packet;

said first IC-breaker is further configured to open the firewall for a time period at reception of a returned particular IP data packet from the second IC-breaker, and said returned particular IP data packet sent before the firewall opens through the firewall to the

second IC-breaker, and the second IC-breaker is configured to send the particular type IP data packet to the protected network after receiving the particular type IP data packet; and

said second IC-breaker is configured to identify a size of the particular type IP data packet received from a sender in a form of an IC-breaker, said size is indicative of a type of packet which has been received and a port via which the particular type IP data packet was received.

Claim 22 (New): A method for using a transmission system transmitting IP data packets from an IP-network to a protected network protected by firewall, said method comprising:

receiving and storing an IP data packet by a first IC-breaker located on an IP-network side of the firewall;

transmitting the IP data packet by said first IC-breaker to a second IC-breaker located on a protected network side of the firewall through the firewall, on receipt of a particular type IP data packet;

opening the firewall by said particular type IP data packet for a period of time while awaiting receipt of said particular type IP data packet from said second IC-breaker;

sending said stored IP data packet through the open firewall to said second IC-breaker;

identifying by said second IC-breaker a size of the particular type IP data packet received from said first IC-breaker, said size being indicative of a type of IP data packets which have been received and a port via which the data packet was received;

returning the particular type IP data packet from said second IC-breaker to said first IC-breaker, thereby opening the firewall for the period of time;

awaiting reception, by said second IC-breaker, of said IP data packet for the protected network sent from said first IC-breaker, during said period of time the firewall is open; and
sending the received IP data packet to the protected network by said second IC-breaker.

Claim 23 (New): Apparatus for providing access to a firewall protected network, comprising:

means for opening the firewall to enable IP data packets to be transmitted through the firewall to said protected network, wherein said means for opening the firewall includes a first and second IC-breaker located on opposite sides of said firewall;

wherein said firewall is configured to allow IP-traffic from a protected side thereof to another side, and communication between said first and second IC-breakers use a ping service, a response to said ping service opening the firewall for transmission of IP data packets to said protected network;

wherein the second IC-breaker, located on the protected network side of the firewall is configured to:

identify a size of a ping-packet received from the first IC-breaker, said size being indicative of the type of packet which has been received and a port via which the ping-packet was received;

return the ping-packet to the first IC-breaker, which opens the firewall for a period of time;

await receipt, from the first IC-breaker, of said IP data packet for the protected network during said period of time said firewall is open; and

send the received IP data packets to the protected network.

Claim 24 (New): A transmission system according to Claim 1, wherein said period of time is at least a duration of a transmission of the IP data packets through the firewall by said first or second IC breaker.

Claim 25 (New): A transmission system according to Claim 8, wherein said period of time is at least a duration of a transmission of the IP data packets through the firewall by said first or second IC breaker.

Claim 26 (New): An apparatus for providing access to a firewall protected network according to Claim 14, wherein said period of time is at least a duration of a transmission of the IP data packets through the firewall by said first or second IC breaker.

Claim 27 (New): A transmission system according to Claim 1, wherein said particular type IP data packet is an internet control message protocol packet ICMP.

Claim 28 (New): A transmission system according to Claim 8, wherein said particular type IP data packet is an internet control message protocol packet ICMP.